

6 winding a second length of a second material about the first layer coil at a first
7 pitch to form a second layer coil; and

8 heating the first layer coil and the second layer coil to a temperature for removing
9 any distortion in the first layer coil and the second layer coil.

1 22. (New) The method of Claim 21 wherein the core member is molybdenum and the
2 respective first layer coil and second layer coil is tungsten.

1 23. (New) The method of Claim 21 further including the steps of dissolving the first
2 material to leave the first layer coil and second layer coil, inserting an electrode rod of a second
3 material in the first layer coil and affixing the electrode rod to the first layer coil.

1 24. (New) The method of Claim 23 wherein the dissolving of the first material is done
2 with aqua regia liquid.

1 25. (New) The method of Claim 24 wherein the first layer coil is affixed to the
2 electrode rod by welding.

1 26. (New) A method for producing an electrode used for a discharge lamp, including:
2 a winding step for winding at least one refractory metal wire around a core
3 member and forming n layers of coils one by one, n being larger than one;
4 a shape stabilizing step for stabilizing a shape of the n number of layers of coils;
5 a cutting step for cutting the formed n layers of coils and the core member;
6 a removing step for removing the core member after the cutting step;
7 a rod inserting step for inserting an electrode rod into a space from which the core
8 member has been removed, the electrode rod being made of refractory metal; and

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Cont'd

9 a welding step for fixing the formed n layers of coils to the inserted electrode rod.

1 27. (New) The method of Claim 26,

2 wherein in the winding step, a refractory metal wire forming an $(m+1)$ th layer is
3 wound along a spiral valley between adjacent turns in a coil of an m th layer, m satisfying an
4 inequality $0 < m < n$, an ordinal number given to each layer representing order in which a coil of the
5 layer has been found and

6 wherein refractory metal wires forming the $(m+1)$ th layer and the m th layer are
7 wound in the same turning direction.

1 28. (New) The method of Claim 27,

2 wherein the removing step is performed by immersing the core member, around
3 which the n number of layers have been formed, into a liquid that dissolves the core member but
4 does not dissolve each refractory metal wire.

1 29. (New) The method of Claim 28,

2 wherein the core member is made of molybdenum, and each refractory metal wire
3 is made of tungsten.